IN THE CLAIMS

1. (Currently Amended) Ventilation device with a breathing gas source, a control unit, and a connecting device for connecting the device to a ventilation mask, where the control unit is connected to at least one sensor for detecting a test parameter, ~~characterized in that~~ wherein

-- the control unit (1) has a step generator (19) for determining an at least temporary, essentially stepped change in the inspiratory pressure produced by the breathing gas source (20); in that

-- the sensor (15) is designed to measure a signal corresponding to the change in pressure and is connected to an analyzer (18), which evaluates the change over time in an analysis signal dependent on the measuring signal; and in that

-- the step generator (19) increases the pressure by a pressure step during a ventilation cycle following that in which measured value was evaluated if, after a predetermined time limit has elapsed following the pressure increase, the analyzer (18) determines that the analysis signal deviates from a limit value by more than a predetermined minimum difference.

2. (Currently Amended) Device according to Claim 1, ~~characterized in that~~ wherein the analyzer is designed to evaluate the changes in the ventilation volume as an analysis signal.

3. (Currently Amended) Device according to Claim 1, ~~characterized in that~~ wherein the analyzer (18) is designed to analyze a flow curve as an analysis signal.

4. (Currently Amended) Device according to ~~one of Claims 1 to 3, characterized in that~~ Claim 1, wherein the analyzer (18) is designed to detect a decrease in the maximum ventilation volume from breath to breath at constant inspiratory pressure.

5. (Currently Amended) Device according to ~~one of Claims 1 to 3, characterized in that~~ Claim 1, wherein the analyzer (18) is designed to detect a decrease in the flow occurring at a predetermined time after a sudden pressure increase.

6. (Currently Amended) Device according to ~~one of Claims 1 to 5, characterized in that~~ Claim 1, wherein the sensor (15) is designed as a flow sensor.

7. (Currently Amended) Device according to ~~one of Claims 1 to 6, characterized in that~~ Claim 1, wherein an integrator (17) is connected downstream from the sensor (15).

8. (Currently Amended) Device according to ~~one of Claims 1 to 7, characterized in that~~ Claim 1, wherein the control unit (13) lowers the pressure by a pressure step via the step generator (19) the first time a reduction of the ventilation volume following a pressure increase is not detected.

9. (Currently Amended) Device according to ~~one of Claims 1 to 8, characterized in that~~ Claim 1, wherein the control unit (13) is connected to a setpoint memory for ventilation volume setpoints.

10. (Currently Amended) Device according to ~~one of Claims 1 to 9, characterized in that~~ Claim 1, wherein the control unit (13) is connected to a square-wave generator for defining the pressure curves during the inspiration and expiration phases.

11. (Currently Amended) Device according to ~~one of Claims 1 to 9, characterized in that~~ Claim 1, wherein the control unit (13) is connected to a curve generator for defining the pressure curves during the inspiration and expiration phases.

12. (Currently Amended) Device according to ~~one of Claims 1 to 11, characterized in that~~ Claim 1, wherein the analyzer (18) evaluates a pressure difference between the inspiration phases and the expiration phases.

13. (Currently Amended) Device according to ~~one of Claims 1 to 12, characterized in that~~ Claim 1, wherein the step generator (19) lowers the expiratory pressure to increase the pressure difference.

14. (Currently Amended) Method for controlling a ventilator, in which a breathing gas source is controlled by a control unit as a function of at least one test parameter, ~~characterized in that~~ wherein the

-- control unit (13) produces an at least temporary, essentially stepped change in the pressure generated by the breathing gas source (20); in that

-- the sensor (15) detects a measuring signal corresponding to the change in pressure; and in that

-- the change over time in an analysis signal dependent on the measuring signal is evaluated, and the inspiratory pressure is increased in a subsequent ventilation cycle whenever the analysis signal deviates from a limit value by a predetermined minimum difference at a minimum of one predetermined time.

15. (Currently Amended) Method according to Claim 14, ~~characterized in that~~ wherein a decrease in the ventilation volume relative to the ventilation volume observed immediately after a pressure increase is detected, and in that the control unit (13) increases the pressure precisely when the decrease in the ventilation volume exceeds a predetermined minimum difference after a predetermined time following the pressure increase has elapsed.

16. (Currently Amended) Method according to Claim 14, ~~characterized in that~~ wherein, following an at least approximate step-like pressure increase, the pressure curve realized during the preceding breath is maintained if a decreasing flow at essentially constant pressure is detected after a predetermined time interval following the step-like pressure increase.

17. (Currently Amended) Method according to Claim 14, ~~characterized in that~~ wherein the sensor (15) carries out a flow measurement.

18. (Currently Amended) Method according to Claim 15, ~~characterized in that~~ wherein the volume signal is produced by integration of the flow signal.

19. (Currently Amended) Method according to ~~one of Claims 14 to 18, characterized in that~~ Claim 14, wherein the pressure is lowered by a pressure step the first time a decrease in the ventilation volume following a pressure increase is not detected.

20. (Currently Amended) Method according to ~~one of Claims 14 to 19, characterized in that~~ Claim 14, wherein the control unit (13) considers a target value for the ventilation volume.

21. (Currently Amended) Method according to ~~one of Claims 14 to 20, characterized in that~~ Claim 14, wherein the ventilation pressure is controlled according to the course of a square-wave signal.

22. (Currently Amended) Method according to ~~one of Claims 14 to 21, characterized in that~~ Claim 14, wherein the ventilation pressure is varied by the control unit (13) according to a predetermined pressure curve.

23. (Currently Amended) Method according to ~~one of Claims 14 to 22, characterized in that~~ Claim 14, wherein a pressure difference between the inspiratory and expiratory pressure is determined.

24. (Currently Amended) Method according to ~~one of Claims 14 to 23, characterized in that~~ Claim 14, wherein the pressure difference is increased by lowering the expiratory pressure.

25. (Currently Amended) Method according to ~~one of Claims 14 to 24, characterized in that~~ Claim 14, wherein a pressure is changed from ventilation cycle to ventilation cycle.

26. (Currently Amended) Method according to ~~one of Claims 14 to 25, characterized in that~~ Claim 14, wherein the pressure is held constant for at least two successive inspiration phases.

27. (Currently Amended) Method according to ~~one of Claims 14 to 26, characterized in that~~ Claim 14, wherein the pressure is held constant for at least two successive expiration phases.

28. (Currently Amended) Method according to ~~one of Claims 14 to 27, characterized in that~~ Claim 14, wherein the control unit (13) decreases the pressure only when an actual value of the ventilation volume exceeds the predetermined setpoint.

29. (Currently Amended) Method according to ~~one of Claims 14 to 28, characterized in that~~ Claim 14, wherein, in a first step, the control unit (13) increases the pressure until the ventilation volume reaches the predetermined setpoint, and in that an additional pressure increase is then carried out.

30. (Currently Amended) Method according to ~~one of Claims 14 to 29, characterized in that~~ Claim 14, wherein an at least approximate square-wave form pressure increase is selected for at least a single breath.

31. (Currently Amended) Method according to Claim 30, ~~characterized in that~~ wherein the flow curve following the stepped pressure increase is analyzed for the presence of an increase to a maximum and a subsequent decelerating curve.